Number of Targets Collected in FY 1966

and FY 1967 by Various Collectors

Table I is provided to give the number of missions and number

of targets associated with Black Shield, Trojan Horse, Blue Springs,

25X1 [   ] for FY 1966 and FY 1967.

The numbers of missions indicated in this table are straight-

forward. A mission is easily defined and the various missions are

simply summed up. Unfortunately, the numbers of targets shown in

various categories are not clearly defined.

	No. Missions/Yr.	Total Targets/Yr.	Avg. No. Targets/Mission
25X1 FY 1966	22	1670	76
Blue Springs	45	1305**	29
Trojan Horse	247	8151**	33
25X1 FY 1967	10	916	92
Blue Springs	79	4110**	52
Trojan Horse	178	5696**	32
Black Shield	3*	429*	143*

*   Based on one month's operation
**   Extrapolation from one month's data

Table I.   Number of Targets Collected, by Collector,
in FY 1966 and FY 1967

Basically, the ambiguity in the target numbers is a result of the difficulty in defining a target. Also, the various collection systems are flown against predetermined targets for the most part. Often, the targets considered to have been collected at the end of a mission are, at most, those against which the vehicle explicitly flew. Thus, the target numbers shown in the table may contain some human bias since humans programmed the pre-flight target requirements. In other words, the number of targets collected by any one system may not truly represent the system's actual target collection capability.

A bias similar to the one discussed immediately above can also be discussed. It may be that one collector flies against an area that has a high target density (i.e., number of targets per unit area) while a second collector operates over a low target density area. Thus, even without deciding in advance which targets will be examined after collection one can bias the total number of targets recorded by having several vehicles each flying against differing target density areas.

The above discussed biases can be removed if one has access to the proper adjustment factors. Such correction would no doubt be very difficult, however, because it would require using some uniform definition of a "target" for the various collectors and then arriving at the target densities for the various areas.

The target numbers should also be viewed with the following consideration. The various collectors are in many ways supplementary

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and not competing systems. For example, a drone is a good collector against heavily defended areas in order to not risk loss of a pilot, equipment, etc. In addition, a drone can fly under cloud cover. Thus, a comparison of various numbers of targets per mission may be misleading since one collector may have a low number, but may be the only sensible collector of those few targets.

The numbers in the above table represent both first and second phase reporting. First phase reporting refers to the field reports. Second phase reports are considered to be generated by NPIC. In certain instances, first phase and second phase reporters may not define a "target" in the same way. In general, first phase reports tend to cite more targets for a given mission than do second phase reports. However, for the numbers in the above table it is not entirely clear which numbers are a result of which reporting phase. Some numbers are probably a result of both phases.

In regards to Black Shield one could project the data in the table to a collection effort of one full year. It will be assumed that three vehicles will be operational for Black Shield and that each vehicle can fly three missions per month. This results in 108 missions per year. Assuming that 143 targets per mission are collected (from Table I), a total of about 15,444 targets collected per year can result. It is

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interesting to note that the [   ] Blue Springs, and Trojan Horse,   25X1

combined, observed 11,126 targets in FY 1966 and 10,722 targets in

FY 1967.

Of course, many other factors must be taken into account to
fairly compare the effectiveness of various collection systems. Factors
must be taken into account such as target density in the area covered
by the collector and similar items already discussed as well as the
various system parameters for collectors such as range, camera
resolution, flexibility of the vehicle's movements, speed of the vehicle,
swath width, all-weather capability, maximum film load, etc.

The best evaluation of the effectiveness of the collectors available
will no doubt be a study that utilizes:

    1.   The historical number of targets collected for

        past years.

    2.   The existing (and future) system parameters

        associated with the various collectors (including,

of course, costs)